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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,146	07/21/2003	Larry D. Miller	LMR-11102/16	5666
25006	7590	11/02/2004	EXAMINER	
GIFFORD, KRASS, GROH, SPRINKLE ANDERSON & CITKOWSKI, PC 280 N OLD WOODARD AVE SUITE 400 BIRMINGHAM, MI 48009			ELLINGTON, ALANDRA	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,146	Applicant(s) MILLER, LARRY D.	
	Examiner Alandra Ellington	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-8,10,20 and 21 is/are rejected.
- 7) ☒ Claim(s) 3,5,9,11-13,15-19 and 22-27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/9/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: pressure sensor 82 (pg. 13 line 21), signal line 86 (pg. 13 line 21).
Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because reference character 56 is designated for a "support arm" (pg. 8 line 3) and "cable" (pg. 8 lines 21,22). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4, 6-8, 10, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama (6,213,236).

a. With respect to Claim 1, Yokoyama discloses an anti-bob system operable to control a shock damping device of a cycle, said system including a crank axle torque detector 48 operable to detect a level of torque applied to a crank axle 28, and to provide a control signal corresponding to said level of torque (col. 4 lines 6-21, 45-49, col. 5 lines 50-54, 58-67, col. 6 lines 1-39 {Figs. 1, 3}); and a shock damping device 93 coupled to a frame 12, 32 of said cycle 11 (col. 4 lines 6-10 {Fig. 1}), said shock damping device 93 functioning to absorb and dampen mechanical shocks communicated to said frame 12, 32 (col. 6 lines 40-50), said

shock damping device 93 including an activator 85,87 for controlling the damping function thereof, said activator 85,87 being operable to receive the control signal from said crank axle torque detector 48 and to control the shock damping device 93 in response thereto; whereby said shock damping device 93 is controlled in response to the level of torque applied to said crank axle 28 (col. 6 lines 1-27, col. 7 lines 10-38).

b. With respect to Claim 2, Yokoyama discloses the system of claim 1, wherein said control signal is a mechanical signal (col. 7 lines 10-38).

c. With respect to Claim 4, Yokoyama discloses the system of claim 2, wherein said mechanical signal comprises a change in pressure of a hydraulic fluid (col. 7 lines 15-38).

d. With respect to Claim 6, Yokoyama discloses the system of claim 1, wherein said torque detector includes a swing arm 77 pivotally suspended from said frame 12,32, said swing arm 77 having said crank axle 28 rotatably supported thereupon (col. 5 lines 59-65, col. 7 lines 10-18 {Figs. 3,4}); and a biasing member 88,89 disposed so as to impose a biasing force on said swing arm 77 so as to urge the swing arm 77 in a first direction relative to said frame 32; whereby when a torque is applied to the crank axle 28 the torque operates to counter at least a portion of the biasing force so as to displace the swing arm 77 in a second direction different from said first direction; whereby said displacement comprises said control signal (col. 7 lines 10-33 {Figs. 3,4}).

- e. With respect to Claim 7, Yokoyama discloses the system of claim 6, wherein said biasing member 88,89 is a spring (col. 7 lines 10-33 {Figs. 3,4}).
- f. With respect to Claim 8, Yokoyama discloses the system of claim 6, wherein said torque detector 48 further includes a stop member 92 disposed so as to limit the motion of said swing arm 77 in said first direction (col. 6 lines 13-21).
- g. With respect to Claim 10, Yokoyama discloses the system of claim 6, wherein said system further includes a volume of a hydraulic fluid which is in mechanical communication with the swing arm 77 and the activator 85,87 of said shock damping device 93 so that said displacement of the swing arm 77 is communicated to said activator 85,87 by said hydraulic fluid (col. 5 lines 58-67, col. 6 lines 1-27, col. 7 lines 10-33 {Figs. 3,4}).
- h. With respect to Claim 14, Yokoyama discloses the system of claim 6, wherein the biasing member 88,89 is adjustable so that the biasing force imposed on said swing arm 77 may be varied (col. 6 lines 1-20, col. 7 lines 10-30).
- i. With respect to Claim 20, Yokoyama discloses the system of claim 1, wherein said activator 85,87 is operable to switch the shock damping device 93 from an on state in which it functions to dampen mechanical shocks communicated to said frame 12,32, to an off state in which it does not dampen mechanical shocks communicated to said frame 12,32 (col. 6 lines 43-50, col. 7 lines 10-38 {Figs. 3,4}).

j. With respect to Claim 21, Yokoyama discloses the system of claim 1, wherein said activator 85,87 is operable to control the shock damping device 93 so as to vary the degree to which said shock damping device 93 functions to dampen mechanical shocks communicated to said frame 12,32 (col. 7 lines 15-42).

Allowable Subject Matter

5. Claims 3, 5, 9, 11-13, 15-19 and 22-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The reasons for the indication of allowable subject matter are based on the inclusion of:

- a. In Claim 3, wherein the mechanical signal comprises the displacement of a control cable.
- b. In Claim 5, wherein the control signal is an electrical signal.
- c. In Claim 9, a cable which is in mechanical communication with the swing arm and with the activator of the shock damping device so that the displacement of the swing arm is communicated to the activator by the cable.
- d. In Claim 11, an electrical transducer which is in mechanical communication with said swing arm and in electrical communication with the activator of the shock damping device, the transducer being operable to convert

the displacement of the swing arm into an electrical control signal and to convey that signal to the actuator.

e. In Claim 15, a biasing member disposed so as to impose a biasing force on the bearing assembly so as to urge the bearing assembly in a first direction relative to the frame; whereby when a torque is applied to the crank axle, the torque operates to counter at least a portion of the biasing force so as to displace the bearing assembly in a second direction different from the first direction, whereby the displacement comprises the control signal.

f. In Claim 22, wherein the crank axle torque detector comprises a pressure responsive device interposed between the pedal and a foot of a user who is operating the cycle.

g. In Claim 25, wherein the crank axle torque detector is operable to detect a periodically varying level of torque and to provide a control signal corresponding to the periodically varying level.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- a. Busby (6,029,990) discloses a direct drive bicycle.
- b. Shultz (4,997,197) discloses a soft suspension bicycle.
- c. Smith (6,206,396) discloses a cycle incorporating shock absorber.
- d. Fan (5,857,691) discloses a bicycle shock absorption structure.

- e. Becker (5,829,733) discloses an adjustable height shock absorbing bicycle seat mounting assembly.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alandra Ellington whose telephone number is (571) 272-2178. The examiner can normally be reached on Monday - Friday, 7:30am - 4:00pm.
9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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